

Automotive Electrical and Engine Performance 9th Edition
Chapter 45 – Module Programming
Multiple Choice Questions Quiz B

1. What was the primary update to the programming method introduced in 1990?
 - a. Use of remote access for reprogramming
 - b. Adoption of vehicle-specific tuning software
 - c. Flash reprogramming of EEPROM
 - d. Implementation of PROM chips for emissions updates

2. What is the purpose of the J2534 pass-through device?
 - a. To monitor fuel injection timing
 - b. To allow diagnostic trouble code retrieval
 - c. To support hardware testing within the engine module
 - d. To enable reprogramming by connecting the vehicle's DLC to a computer

3. What is the role of a battery maintainer during module reprogramming?
 - a. Protect against voltage drops that could disrupt programming
 - b. Monitor the power consumption of the vehicle module
 - c. Preserve the battery's physical integrity during reprogramming
 - d. Ensure proper communication between the module and diagnostic tools

4. Which organization created the J2534 standard?
 - a. EPA
 - b. CARB
 - c. SAE
 - d. NASTF

5. What is a significant feature of remote programming?
- a. It can be conducted without Internet access
 - b. It eliminates the need for manufacturer subscriptions
 - c. It relies on a third party to reprogram the module remotely
 - d. It allows reprogramming without physical vehicle connection
6. Why did the introduction of J2534 compliance in 2004 revolutionize module programming?
- a. It mandated onboard diagnostic reprogramming for all vehicle modules
 - b. It enabled independent technicians to reprogram emission-related modules
 - c. It removed the need for specialized training among vehicle service technicians
 - d. It replaced the existing EEPROM memory standards
7. What is a drawback of aftermarket programmers?
- a. They can exceed manufacturer torque specifications
 - b. They are not compatible with J2534 pass-through devices
 - c. They often take vehicles out of EPA/CARB compliance
 - d. They lack the capability to interact with battery maintainers
8. What was the primary limitation of programming methods prior to 1996?
- a. Inability to use remote diagnostic systems
 - b. Programming required complete module replacement
 - c. Compatibility issues with emission-control modules
 - d. Lack of available diagnostic codes

9. What issue can arise if a module's voltage drops during reprogramming?

- a. Corruption of EEPROM data
- b. Permanent hardware damage to the module
- c. Activation of incorrect diagnostic codes
- d. Interruption of communication between the technician and PCM

10. What is the advantage of onboard programming over offboard programming?

- a. It reduces costs associated with purchasing standalone equipment
- b. It is independent of Internet connectivity
- c. It uses the vehicle's existing power and communication systems
- d. It eliminates the need for manufacturer approval

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Correct Answers:

1. c
2. d
3. a
4. c
5. c
6. b
7. c
8. b
9. a
10. c